```
MM      MM  TTTTTTTTTT  HH    HH  DDDDDDD    MM      MM  IIIIII   NN      NN       11
MM      MM  TTTTTTTTTT  HH    HH  DDDDDDD    MM      MM  IIIIII   NN      NN       11
MMMM  MMMM      TT      HH    HH  DD    DD  MMMM  MMMM     II     NN      NN      1111
MMMM  MMMM      TT      HH    HH  DD    DD  MMMM  MMMM     II     NN      NN      1111
MM  MM  MM      TT      HH    HH  DD    DD  MM  MM  MM     II     NNNN    NN       11
MM  MM  MM      TT      HHHHHHHHHH  DD    DD  MM      MM     II     NN  NN  NN       11
MM      MM      TT      HHHHHHHHHH  DD    DD  MM      MM     II     NN  NN  NN       11
MM      MM      TT      HH    HH  DD    DD  MM      MM     II     NN    NNNN       11
MM      MM      TT      HH    HH  DD    DD  MM      MM     II     NN    NNNN       11
MM      MM      TT      HH    HH  DD    DD  MM      MM     II     NN      NN       11
MM      MM      TT      HH    HH  DDDDDDD    MM      MM  IIIIII   NN      NN     111111
MM      MM      TT      HH    HH  DDDDDDD    MM      MM  IIIIII   NN      NN     111111
```

```
LL            IIIIII    SSSSSSSS
LL            IIIIII    SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0000    1        .TITLE  MTH$DMIN1       DMIN1 function
0000    2        .IDENT  /1-002/         ; File: MTHDMIM1.MAR
0000    3
0000    4 ;
0000    5 ;*********************************************************************
0000    6 ;*                                                                  *
0000    7 ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                         *
0000    8 ;*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.          *
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0000   24 ;*                                                                  *
0000   25 ;*                                                                  *
0000   26 ;*********************************************************************
0000   27 ;
0000   28 ;
0000   29 ; FACILITY: MATH LIBRARY
0000   30 ;++
0000   31 ; ABSTRACT:
0000   32 ;       This module contains routine MTH$DMIN1:
0000   33 ;       Return the smaller of n double-precision floating-point
0000   34 ;       numbers.
0000   35 ;
0000   36 ;
0000   37 ;
0000   38 ;--
0000   39 ;
0000   40 ; VERSION: 0
0000   41 ;
0000   42 ; HISTORY:
0000   43 ;
0000   44 ; AUTHOR:
0000   45 ;       Jonathan M. Taylor, 14-JUL-77: Version 0
0000   46 ;
0000   47 ; MODIFIED BY:
0000   48 ;
0000   49 ;
0000   50 ;
```

```
0000    52              .SBTTL  HISTORY          ; Detailed Current Edit History
0000    53
0000    54
0000    55 ; Edit History for Version 0 of MTH$DMIN1
0000    56 ;
0000    57 ; 0-4   - Remove MTH$FLAG_JACKET.  TNH 26-July-78
0000    58 ; 1-001 - Update version number and copyright notice.  JBS 16-NOV-78
0000    59 ; 1-002 - Add "_" to the PSECT directive.  JBS 22-DEC-78
```

MTH$DMIN1
1-002

DMIN1 function
DECLARATIONS

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16-SEP-1984 01:18:43   VAX/VMS Macro V04-00   Page   3
 6-SEP-1984 11:22:20   [MTHRTL.SRC]MTHDMIN1.MAR;1   (3)

```
          0000      61              .SBTTL  DECLARATIONS
          0000      62
          0000      63      ;
          0000      64      ; INCLUDE FILES:
          0000      65      ;     oerr.mar
          0000      66      ;
          0000      67      ;
          0000      68      ;
          0000      69      ; EXTERNAL SYMBOLS:
          0000      70      ;     NONE
          0000      71      ;
          0000      72      ;
          0000      73      ;
          0000      74      ; MACROS:
          0000      75      ;     NONE
          0000      76      ;
          0000      77      ;
          0000      78      ;
          0000      79      ; PSECT DECLARATIONS:
      00000000      80              .PSECT  _MTH$CODE        PIC, SHR, LONG, EXE, NOWRT
          0000      81      ;
          0000      82      ;
          0000      83      ; EQUATED SYMBOLS:
          0000      84      ;     NONE
          0000      85      ;
          0000      86      ;
          0000      87      ;
          0000      88      ; OWN STORAGE:
          0000      89      ;     NONE
          0000      90      ;
```

G 9

MTH$DMIN1   DMIN1 function   16-SEP-1984 01:18:43   VAX/VMS Macro V04-00   Page   4
1-002   MTH$DMIN1   6-SEP-1984 11:22:20   [MTHRTL.SRC]MTHDMIN1.MAR;1   (4)

```
                                    0000       92                        .SBTTL   MTH$DMIN1
                                    0000       93
                                    0000       94    ;++
                                    0000       95    ; FUNCTIONAL DESCRIPTION:
                                    0000       96    ;       Return the minimum of n arguments, n is greater than or equal
                                    0000       97    ;       to 1.
                                    0000       98    ;
                                    0000       99    ;
                                    0000      100    ; CALLING SEQUENCE:
                                    0000      101    ;       Minimum.wd.v = MTH$DMIN1 ({arg.rd.r})
                                    0000      102    ;
                                    0000      103    ;
                                    0000      104    ;
                                    0000      105    ; INPUT PARAMETERS:
                                    0000      106    ;       The n parameters are double-precision floating point values
                                    0000      107    ;       and are call-by-reference.
                                    0000      108    ;
                                    0000      109    ;
                                    0000      110    ; IMPLICIT INPUTS:
                                    0000      111    ;       NONE
                                    0000      112    ;
                                    0000      113    ; OUTPUT PARAMETERS:
                                    0000      114    ;       NONE
                                    0000      115    ;
                                    0000      116    ; IMPLICIT OUTPUTS:
                                    0000      117    ;       NONE
                                    0000      118    ;
                                    0000      119    ; COMPLETION CODES:
                                    0000      120    ;       NONE
                                    0000      121    ;
                                    0000      122    ; SIDE EFFECTS:
                                    0000      123    ;       Reserved Operand exception can occur.
                                    0000      124    ;
                                    0000      125    ;--
                                    0000      126    ;--
                                    0000      127
                          0004      0000      128            .ENTRY   MTH$DMIN1,       ^M<R2>
              52   6C     9A        0002      129            MOVZBL   (AP), R2         ; R2 = arg count
                   8C     D5        0005      130            TSTL     (AP)+            ; AP -> first arg
              50   9C     70        0007      131   1$:      MOVD     @(AP)+, R0       ; R0/R1 = trial min
                   08     11        000A      132            BRB      3$               ; check arg count
        50    00  BC     71         000C      133   2$:      CMPD     @0(AP), R0       ; if this arg is less than trial min
                   F5     19        0010      134            BLSS     1$               ; then it becomes new trial min
                   8C     D5        0012      135            TSTL     (AP)+            ; else ignore it
        F5    52  F5               0014       136   3$:      SOBGTR   R2, 2$           ; return if arg count exausted
                   04               0017      137            RET                       ; with min in R0/R1
                                    0018      138
                                    0018      139
                                    0018      140            .END
```

MTH$DMIN1   00000000 RG   01

```
                                    +------------------+
                                    ! Psect synopsis !
                                    +------------------+

PSECT name                        Allocation          PSECT No.   Attributes
----------                        ----------          ---------   ----------
.  ABS  .                         00000000 (    0.)   00 (   0.)  NOPIC  USR   CON   ABS   LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
_MTH$CODE                         00000018 (   24.)   01 (   1.)  PIC    USR   CON   REL   LCL   SHR   EXE   RD   NOWRT NOVEC LONG

                                    +-----------------------+
                                    ! Performance indicators !
                                    +-----------------------+

Phase                 Page faults    CPU Time       Elapsed Time
-----                 -----------    --------       ------------
Initialization             31        00:00:00.05    00:00:00.94
Command processing        124        00:00:00.43    00:00:03.64
Pass 1                     69        00:00:00.33    00:00:01.79
Symbol table sort           0        00:00:00.00    00:00:00.00
Pass 2                     38        00:00:00.31    00:00:01.32
Symbol table output         2        00:00:00.01    00:00:00.01
Psect synopsis output       2        00:00:00.02    00:00:00.02
Cross-reference output      0        00:00:00.00    00:00:00.00
Assembler run totals      268        00:00:01.17    00:00:07.73
```

The working set limit was 900 pages.
1403 bytes (3 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 1 non-local and 3 local symbols.
140 source lines were read in Pass 1, producing 10 object records in Pass 2.
0 pages of virtual memory were used to define 0 macros.

```
                                    +-----------------------------+
                                    ! Macro library statistics !
                                    +-----------------------------+

Macro library name                          Macros defined
------------------                          --------------
_$255$DUA28:[SYSLIB]STARLET.MLB;2                  0
```

0 GETS were required to define 0 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:MTHDMIN1/OBJ=OBJ$:MTHDMIN1 MSRC$:MTHDMIN1/UPDATE=(ENH$:MTHDMIN1)

MTHDCOSH
LIS

MTHDMIN1
LIS

MTHDLOG
LIS

MTHDSINCO
LIS

MTHDATANH
LIS

MTHDNINT
LIS

MTHDSQRT
LIS

MTHDCONJG
LIS

MTHDINT
LIS

MTHDMAX1
LIS

MTHDSIGN
LIS

MTHDIM
LIS

MTHDMOD
LIS

MTHDSINH
LIS

MTHDEXP
LIS

MTHDFLOOR
LIS

MTHDPROD
LIS